MULTIMEDIA UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

# FINAL EXAMINATION

**TRIMESTER 1, 2016/2017**

## DBM5028 – BUSINESS FINANCE

(For Diploma Students Only)

19 OCTOBER 2016
2.30 pm- 4.30pm
(2 Hours)

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**INSTRUCTIONS TO STUDENT**

1. This question paper consists of 11 pages with 2 sections.
2. Answers for **Section A** should be shaded on the OMR sheet provided.
3. For **Section B**, please write your answer in the answer booklet provided.
4. The formula tables are given in the Appendix.

## SECTION A: MULTIPLE CHOICE QUESTIONS (40 marks)

*Instruction: Please shade your answers in the OMR sheet provided.*

1. Corporate shareholders _____

   A. are proportionately liable for the firm's debts.
   B. are protected from all losses.
   C. are able to change the corporation.
   D. are receive tax-free distributions since all profits are taxed at the corporate level.

2. Which one of the following is most appropriate to create a situation where an agency conflict could arise?

   A. Increasing the size of a firm's operations.
   B. Downsizing a firm.
   C. Separating management from ownership.
   D. Decreasing employee turnover.

3. Ted currently owns 100 shares of a publicly traded stock which he would like to sell. Which one of the following provides the most efficient means for Ted to sell his shares?

   A. Issuer sponsored Malaysia auction.
   B. Proxy statement.
   C. Private placement transaction.
   D. Secondary market transaction.

4. If you accept a job as a domestic security analyst for a brokerage firm, you are most likely working in which one of the following financial areas?

   A. International finance.
   B. Corporate finance.
   C. Capital management.
   D. Investments.

5. Which one of the following will reduce net income but does not affect the operating cash flow of a firm for the current year?

   A. Indirect cost.
   B. Direct cost.
   C. Depreciation cost.
   D. Variable cost.

**Continued...**

6. Which one of the following terms is defined as the total tax paid divided by the total taxable income?

   A. Average tax rate.
   B. Variable tax rate.
   C. Marginal tax rate.
   D. Corporate tax rate.

7. Operating cash flow is defined as:

   A. a firm's net profit over a specified period of time.
   B. the cash that a firm generates from its normal business activities.
   C. a firm's operating margin.
   D. the change in the net working capital over a stated period of time.

8. Which one of the following will decrease the liquidity level of a firm?

   A. Cash purchase of inventory.
   B. Credit sale of inventory.
   C. Cash sale of inventory.
   D. Collection of an account receivable.

9. The interest rate used to compute the present value of a future cash flow is called the:

   A. prime rate.
   B. current rate.
   C. discount rate.
   D. compound rate

10. Given an interest rate of zero percent, the future value of a lump sum amount invested today will always:

    A. Remain constant, regardless of the investment time period.
    B. Decrease if the investment time period is shortened.
    C. Decrease if the investment time period is lengthened.
    D. Be equal to RM0.

**Continued...**

11. Razlina deposits RM 3,000 into an account which pays 3.5 percent interest, compounded annually. At the same time, Faiz deposits RM 3,000 into an account paying 5 percent interest, compounded annually. At the end of three years:

    A. Both Razlina and Faiz will have accounts of equal value.
    B. Faiz will have twice the money saved that Razlina does.
    C. Faiz will earn exactly twice the amount of interest that Razlina earns.
    D. Faiz will have a larger account value than Razlina will.

12. The relationship between the present value and the time period is best described as:

    A. Direct.
    B. Inverse.
    C. Unrelated.
    D. Parallel.

13. Hanis just won a scholarship that will pay her RM800 per month starting today, and continuing for the next 48 months. Which one of the following terms best describes these scholarship payments?

    A. Ordinary annuity.
    B. Annuity due.
    C. Perpetuity.
    D. Ordinary perpetuity.

14. Rianna pays 6.5 percent interest monthly on her credit card account. When the interest rate expressed as it were compounded annually, the rate would be referred to as the:

    A. Annual percentage rate.
    B. Compounded rate.
    C. Discounted rate.
    D. Effective annual rate.

15. Kenny is buying new car today and is paying a RM 500 cash down payment. He will finance the balance at 7.25 percent interest. His loan requires 36 equal monthly payments of RM450 with the first payment due is 30 days from today. Which one of the following statements is correct concerning this purchase?

    A. The present value of the car is equal to RM 500 + (36 × RM 450).
    B. The RM 500 is the present value of the purchase.
    C. The car loan is an annuity due.
    D. To compute the initial loan amount, you must use a monthly interest rate.

**Continued...**

16. Which one of the following is an example of a perpetuity?

A. Trust income of RM 1, 200 a year forever.
B. Retirement pay of RM 2, 200 a month for 20 years.
C. Lottery winnings of RM 1, 000 a month for life.
D. Car payment of RM 260 a month for 60 months.

17. A registered form bond is defined as a bond that:

A. is a bearer bond.
B. is held in street name.
C. pays coupon payments directly to the owner of record.
D. is unsecured.

18. Miller Farm Products is issuing a 15-year, unsecured bond. Based on this information, you know that this debt can be described as a:

A. note.
B. bearer form bond.
C. debenture.
D. registered form bond

19. A call provision grants the bond issuer the:

A. right to contact each bondholder to determine if he or she would like to extend the term of his or her bonds.
B. option to exchange the bonds for equity securities.
C. right to automatically extend the bond's maturity date.
D. option of repurchasing the bonds prior to maturity at a pre-specified price.

20. Dexter, Inc. has a bond issue outstanding. The issue's indenture provision prohibits the firm from redeeming the bonds during the first three years. This provision is referred to as the _____ provision.

A. safeguard
B. market
C. liquidity
D. deferred call

**Continued...**

21. Dividends are best defined as:

A. cash payments to shareholders.
B. cash payments to either bondholders or shareholders.
C. cash or stock payments to shareholders.
D. cash or stock payments to either bondholders or shareholders.

22. Which one of the following generally pays a fixed dividend, receives first priority in dividend payment, and maintains the right to a dividend payment, even if that payment is deferred?

A. Cumulative common
B. Noncumulative common
C. Noncumulative preferred
D. Cumulative preferred

23. A person who executes customer orders to buy and sell securities on the floor of the Bursa Malaysia is called a:

A. Floor trader.
B. Specialist.
C. Market maker.
D. Commission broker.

24. The dividend growth model can be used to value the stock of firms which pay which type of dividends?
I. constant annual dividend
II. annual dividend with a constant increasing rate of growth
III. annual dividend with a constant decreasing rate of growth

A. I only.
B. II only.
C. II and III only.
D. I, II, and III only.

25. Computing the present value of a growing perpetuity is most similar to computing the current value of which one of the following?

A. Non-dividend-paying stock.
B. Stock with a constant dividend.
C. Stock with irregular dividends.
D. Stock with a constant growth dividend.

**Continued...**

26. The net present value of an investment represents the difference between the investments:

A. Cash inflows and outflows.
B. Cost and its net profit.
C. Cost and its market value.
D. Cash flows and its profits.

27. The payback period is the length of time it takes an investment to generate sufficient cash flows to enable the project to:

A. Produce a positive annual cash flow.
B. Produce a positive cash flow from assets.
C. Offset its initial costs.
D. Offset its total expenses.

28. Which one of the following defines the internal rate of return for a project?

A. Discount rate that creates a zero cash flow from assets.
B. Discount rate which results in a zero net present value for the project.
C. Discount rate which results in a net present value equal to the project's initial cost.
D. Rate of return required by the project's investors.

29. Both Projects A and B are acceptable as independent projects. However, the selection of either one of these projects eliminates the option of selecting the other project. Which one of the following terms best describes the relationship between Project A and Project B?

A. Mutually exclusive.
B. Conventional.
C. Multiple choice.
D. Dual return.

30. Which one of the following indicates that a project is expected to create value for its owners?

A. Profitability index less than 1.0.
B. Payback period greater than the requirement.
C. Positive net present value.
D. Positive average accounting rate of return.

**Continued...**

31. Accounts receivable financing is the term used to describe which of the following types of loans which involve either the assignment or the factoring of a firm's accounts receivables?

A. Secured short-term loan.
B. Unsecured short-term loan.
C. Secured long-term loan.
D. Unsecured long-term loan.

32. Which one of the following activities is a source of cash?

A. Decreasing long-term debt.
B. Increasing inventory.
C. Decreasing account receivables.
D. Increasing fixed assets.

33. Suppose that Martin Metal Products changes its policy and starts requiring all of its customers to pay within 20 days rather than the 30 days that it currently allows. Which one of the following will result from this change?

A. Increase in receivables period.
B. Increase in inventory period.
C. Decrease in cash cycle.
D. Increase in operating cycle.

34. A firm has the following account balances. Which one of the following statements is **CORRECT** concerning those balances?

| Account | Beginning Balance (RM) | Ending Balance (RM) |
|---|---|---|
| Account receivable | 18, 700 | 19, 600 |
| Account Payable | 23,100 | 22, 800 |
| Inventory | 29, 700 | 28, 600 |
| Long term Debt | 48, 400 | 42, 600 |
| Common stock | 56, 000 | 54, 500 |

A. Accounts receivable is a RM 900 source of cash.
B. Common stock is a RM 1,500 source of cash.
C. Net working capital, excluding cash, is a RM 1,500 use of cash.
D. Total debt is a RM 6,100 use of cash.

**Continued...**

35. Garnishes, Inc. has sales for the year of RM 46,300 and cost of goods sold of RM 21,700. The firm carries an average inventory of RM 4,800 and has an average accounts payable balance of RM 4,400. What is the inventory period?

A. 12.39 days.
B. 18.68 days.
C. 31.29 days.
D. 80.74 days.

36. Which one of the following terms refers to the length of time a firm grants its customers to pay for their purchases?

A. Lockbox period.
B. Discount period.
C. Credit period.
D. Cash cycle.

37. Which one of the following is the bill given to a customer for goods he or she purchased?

A. Account aging.
B. Invoice.
C. Receipt.
D. Remittance advice.

38. What is the primary purpose of a cash discount?

A. Customer compensation for an out of stock item.
B. Customer compensation for faulty goods or services.
C. Means of offsetting the interest charges on an account receivable.
D. Inducement to pay promptly.

39. Faith wrote a check for RM 22 on Friday, May 6. The check cleared the bank on Wednesday, May 11. There were no other checks or deposits outstanding during the month. Given this, which one of the following statements is correct?

A. On May 6, the available balance decreased by RM 22.
B. On May 11, the available balance was RM 22 less than the ledger balance.
C. On May 14, the available balance increased by RM 22.
D. On May 10, the ledger balance was RM 22 less than the available balance.

**Continued...**

40. A firm offers credit terms of 1/5, net 25. How long is the net credit period?

A. 1 day.
B. 5 days
C. 20 days
D. 25 days

**[TOTAL 40 MARKS]**

## SECTION B: STRUCTURED QUESTIONS (60 marks)

*Instruction: Please write all your answers in the Answer Booklet provided.*

## QUESTION 1

a) Assume that 20 years from now, you will be receiving RM 200,000. What is this money worth to you today if you can earn 12 percent interest, compounding annually?

(2 marks)

b) Assume that on 1 June 2016, Andrew deposit RM 2,000 into a saving account that pays 7 percent per year. If the bank compounds interest semi-annually, how much will Andrew receive on 1 June 2020?

(2 marks)

c) Lee only has RM 1,100 today but he needs RM 2,500 to buy a new hand phone. How long will he has to wait to buy the hand phone if he earns 8.5 percent compounded annually on his saving?

(2marks)

d) Unit Trust agent just told you that you need RM 20,000 today in order to have RM 500,000 when you retire 35 years from now. How much is the interest rate that you must earn in order to achieve this target? Assume interest is compounded annually.

(2 marks)

e) Nestle Inc. was issuing bond with features of 20 years and 5.5 percent coupon bond. The face value of the bond is RM 1,000 and the bond makes annual coupon payments. The required return on the bond is 10 percent. Answer the following questions:

i. What is the bond price? (3 marks)
ii. Is it selling at par, discount or premium? (0.5 mark)
iii. What is the current yield? (1.5 marks)

**Continued...**

f) CISCO Inc. offers to their bondholders, the yield to maturity of a RM 1,000 bond is 5 percent compounded semiannually. The bonds carry a 6 percent coupon rate (semiannual coupon) and three years to maturity. What is the current market price of the bond?

(3 marks)

**QUESTION 2** **[Total: 16 marks]**

a) Jeffry want to purchase a new house which costs RM 450,000. His plan is to pay 10 percent down in cash and finance the balance over 30 years at 3.25 percent. The bank agrees to allow his monthly mortgage payment to be equal to 30 percent of his monthly income.

i. What will be his monthly mortgage payment? (4 marks)
ii. Does he afford to fulfill the bank's requirement with his current salary of RM 4,000 per month? (2 marks)

b) Salina want to invest her money into retirement scheme for the next 40 years. She has two investment option to consider in order to get higher future value. Investment A will provide her 8 percent interest for the first 20 years and 6 percent interest for the next 20 years. Investment B offers 8.5 percent for first 15 years and 7 percent for the next 25 years. If Salina want to invest RM 10,000 today, which investment should she choose? Why and why not?

(4.5 marks)

c) Sime Darby Bhd is trying to decide which one of two projects it should accept. Both projects have the same start-up costs. Project 1 will produce annual cash flows of RM 52,000 a year for 6 years. Project 2 will produce cash flows of RM 48,000 a year for 8 years. The company requires 15 percent rate of return. Which project should the company select and why?

(4.5 marks)

**QUESTION 3** **[Total: 15 marks]**

a) Shahrul purchased a share that will pay him an annual dividend of RM 2.40 per share next year. He is required rate of return is 13 percent and the dividend will increase at 4.5 percent annually. What will be his capital gain if he sells the share four years from now?

(6 marks)

b) Setia Alam Berhad paid annual dividend of RM 4.50 per share last year. The company announced that future dividends will increased by 3.5 percent annually. What is the amount of expected dividend in the next five years?

(2 marks)

c) Mamee Berhad is expected to pay its first dividend of RM 0.50 per share per year started from the fourth year. On seventh year, the company is expected to increase the dividend by 2.5 percent per year. What is the value of the share today if the required rate of return is 13 percent?

(7 marks)

**[Total: 15 marks]**

## QUESTION 4

a) Jaya Plastics is considering two available projects. The following table below shows the cash inflows that will be produced by both projects. The company expects the estimate payback period is 3 years with required rate of return is 12 percent.

| Year | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Project A (RM) | -100, 000 | 30, 000 | 45, 000 | 40, 000 | 30, 000 |
| Project B (RM) | -90, 000 | 30, 000 | 20, 000 | 30, 000 | 40, 000 |

i. What is the payback period for both projects? (6 marks)
ii. Which project(s) should the company accept? Why? (0.5 mark)

b) Alice Florist buys flowers for RM 2.50 each and resells them for RM 10 each. Usually, the shop sells 8,000 flowers per year and orders 700 flowers at one-time exclusive fixed cost of RM 20 per order. The carrying cost is RM 1 per unit. The inventory is totally sold out before it is restocked.

i. What are the total annual carrying cost? (2 marks)
ii. What are the total annual restocking cost? (2 marks)
iii. What is the economic order quantity? (1.5 marks)

c) Suppose the real rate is 6.5 percent and the inflation rate is 3.2 percent. What will be the nominal rate?

(2 marks)
**[Total: 14 marks]**

**[TOTAL 60 MARKS]**

**End of Page.**

# Appendix

**I. The cash flow identity**

Cash flow from assets = Cash flow to creditors (bondholders)
+ Cash flow to stockholders (owners)

**II. Cash flow from assets**

Cash flow from assets = Operating cash flow
− Net capital spending
− Change in net working capital (NWC)

where

Operating cash flow = Earnings before interest and taxes (EBIT)
+ Depreciation − Taxes

Net capital spending = Ending net fixed assets − Beginning net fixed assets
+ Depreciation

Change in NWC = Ending NWC − Beginning NWC

**III. Cash flow to creditors (bondholders)**

Cash flow to creditors = Interest paid − Net new borrowing

**IV. Cash flow to stockholders (owners)**

Cash flow to stockholders = Dividends paid − Net new equity raised

**I. Symbols**

PV = Present value, what future cash flows are worth today
$FV_t$ = Future value, what cash flows are worth in the future at time $t$
$r$ = Interest rate, rate of return, or discount rate per period—typically, but not always, one year
$t$ = Number of periods—typically, but not always, the number of years
$C$ = Cash amount

**II. Future value of $C$ invested per period for $t$ periods at $r$ percent per period**

$FV_t = C \times [(1 + r)^t - 1]/r$

A series of identical cash flows paid for a set number of periods is called an annuity, and the term $[(1 + r)^t - 1]/r$ is called the *annuity future value factor.*

**III. Present value of $C$ per period for $t$ periods at $r$ percent per period**

$PV = C \times \{1 - [1/(1 + r)^t]\}/r$

The term $\{1 - [1/(1 + r)^t]\}/r$ is called the *annuity present value factor.*

**IV. Present value of a perpetuity of $C$ per period**

$PV = C/r$

A perpetuity has the same cash flow every period forever.

I. **Finding the value of a bond**

Bond value = $C \times [1 - 1/(1 + r)^t]/r + F/(1 + r)^t$

where

$C$ = Coupon paid each period

$r$ = Rate per period

$t$ = Number of periods

$F$ = Bond s face value

II. **Finding the yield on a bond**

Given a bond value, coupon, time to maturity, and face value, it is possible to find the implicit discount rate, or yield to maturity, by trial and error only. To do this, try different discount rates in the formula above until the calculated bond value equals the given bond value. Remember that increasing the rate *decreases* the bond value.

I. **The general case**

In general, the price today of a share of stock, $P_0$, is the present value of all of its future dividends, $D_1$, $D_2$, $D_3$, . . . :

$$P_0 = \frac{D_1}{(1 + R)^1} + \frac{D_2}{(1 + R)^2} + \frac{D_3}{(1 + R)^3} + \cdots$$

where $R$ is the required return.

II. **Constant growth case**

If the dividend is constant and equal to $D$, then the price can be written as:

$$P_0 = \frac{D}{R}$$

If the dividend grows at a steady rate, $g$, then the price can be written as:

$$P_0 = \frac{D_1}{R - g}$$

This result is called the *dividend growth model.*

III. **The required return, $R$, can be written as the sum of two things:**

$$R = D_1/P_0 + g$$

where $D_1/P_0$ is the *dividend yield* and $g$ is the *capital gains yield* (which is the same thing as the growth rate in dividends for the steady growth case).